

Sturgeon IEP Work Team Inaugural Meeting
June 4, 2008
2800 Cottage Way, W2605 Conference Room A
10am-12pm

- I. Introductions – What do you hope to gain by participating?
 - i. Information exchange
 - ii. Possibly considering doing research on sturgeon
 - iii. Feather River/Sacramento River main stem studies
 - iv. Yolo bypass, sturgeon are ephemeral here but present and like to find ways to collaborate with others to learn more on the bypass
 - v. Potential projects by KFS: San Joaquin, Feather River studies initiated, possibly interest by DWR for population modeling of green sturgeon
 - vi. Increase collaboration on white and green sturgeon towards conservation
 - vii. Trying to gain information about research
 - viii. Interest in hearing more about how we can have future collaboration
 - ix. Want to know what the rest of us are doing so they can be incorporated into management
 - x. Like to help coordinate and manage monitoring needs for IEP
- II. Summary of events to date (with discussion)
 - i. Interest in starting an IEP PWT a couple years ago, but no one able to lead. IEP coordinators (Kim Webb, Chuck Armor) would like to see this happen and thus we are having our first meeting. Precipitating factor could be listing of green sturgeon, but other events where monitoring is desired include: sport fisheries, water conveyance, and habitat restoration.
 - ii. Will we be planning projects outside of the monitoring activities of IEP?
 - a. Not sure this is the objective of this group given geographic constraint of the IEP area.
- III. Operational structure – consensus seemed to be that we shouldn't concern ourselves too much with this
 - i. Decision making process
 - a. Follow other PWT with no decision making process. Some feel that consensus is a better idea with ability to disagree as necessary. Multiple ideas and decision ideas may be provided to IEP coordinators if a decision cannot be reached.
 - ii. Meeting frequency
 - a. Quarterly meetings may be good for dealing with the fact that BDCP and other programs are moving very quickly, and we can decrease meetings once the PWT is well established, if necessary.
 - iii. Meeting format – little to no discussion
 - iv. Membership
 - a. Membership should include staff from IEP signatory organizations. Consultants can participate as proxies to a signatory IEP entity with ongoing studies, but prefer not to open up meetings to consultants without ongoing sturgeon projects.

- v. Geographic scope
 - a. The scope of the PWT will be limited to the Sacramento and San Joaquin rivers and the Bay/Delta.
- IV. Identify chair or co-chairs
 - i. Alicia Seesholtz and Zac Jackson have both volunteered. Jeff Stewart does not have the time, but willing to assist co-chairs, and has facilities that can be used. UCD can also host meeting, as necessary. Fed and state representation should provide a good balance.
- V. Mission statement
 - i. Can IEP assist with permitting?
 - a. DFG having difficulty with SCP program, M. Gingras provides input when necessary on SCPs for sturgeon.
 - b. The PWT will be able to assist with permitting indirectly, but not something that can fall into the IEP mission well.
 - ii. Having the backing of the PWT can assist with getting the high priority projects forward more easily.
 - iii. Information collation?
 - a. Could maintenance of the website, etc be included in mission?
 - iv. Should we add something about de-listing green sturgeon to show we are working towards something tangible to the IEP coordinators?
 - a. Views expressed to include something in the mission stating 'promote sustainable management of California's sturgeon species towards recovery of listed species and avoiding further listings'
- VI. High priority projects – discussion
 - i. Recruitment is a major issue for sturgeon species across N. America. This may become a problem for numerous species and we do not know enough about survival to year 1 from either WS or GS to evaluate whether this could be an issue in California or may become an issue. What factors now and in the future will be influencing recruitment and reproductive success so we can insure these in the ecosystem.
 - ii. What is going on with these species from 50 to 200mm? At this time, a big black box exists for juvenile sturgeon between RBDD/GCID and their re-appearance in the Delta.
 - iii. J Stewart has a list of topics needing to be addressed and studies needing work. There are lots of grey literature and research. He will send this list back out to the group.
 - iv. What is effect of levees on spawning, rearing, foraging in the river? Lots of bank revetment projects ongoing on. Is there baseline monitoring for these species?
 - v. Telemetry studies in river with juveniles and adults, we once captured them in the bay with tags that lasted 3 years. Now tags are 10 year tags. Could use acoustic tagging study to evaluate reproductive periodicity. One issue may be that small number of tags on small number of fish may not yield the results people are most interested in.

- vi. Coordination with other states on PIT tagging and scute marking. Other states have PIT tagging and scute marking protocols and DFG and other agencies should be aware of this and CA researchers may consider incorporating this into their protocols.
- vii. GS juveniles in the upper river, what are they eating? Where are they? Monitoring to develop life history information, spatial distribution of spawning, is there overlap between white and green sturgeon spawning habitat.
- viii. GS and WS escapement. If we could stage them and sex them, then we may know what the potential population is in the river. UCD or others could work on mark recapture in river.
- ix. Stockton FWS office gets a couple sturgeon a year. They are interested in evaluating Stanislaus and Feather rivers use by sturgeon. Principally green sturgeon is the interest.
- x. B Cavallo- Population dynamic side of thing. Like to be involved in helping design a mark-recapture study to feed modeling efforts.
- xi. M. Adkinson - What is the prevalence of disease in wild sturgeon stocks? Would like to know for mitigation and enhancement purposes, need to know how much disease there is so we can evaluate what can be stocked back into the wild. Would like to find way to sample juvenile fishes to look at disease prevalence so we can try to get to mitigation and enhancement of these species and stocks.
- xii. Maybe a biography of people who are involved with CA sturgeon research, so we can identify people to work together with. What do you get when you google search "sturgeon research in California" hopefully each one of us.
- xiii. Jeff (NMFS) – Coordinate information among people, get data to process on shorter (regulatory deadline) timescales.
- xiv. Very tricky to capture sturgeons. So, can we talk about new ways to capture these fishes for monitoring? Once we get to monitoring, then we can consider trying to determining yoy and larval year class strength.
- xv. Sidenote: Used trawls, gillnets, and long-lining for sturgeon in the Bay-Delta during the 1990s to try to determine index strength of 1-4 year olds. Trawls don't work, gillnet too political, long-lining dangerous. This study is not reported.
- xvi. Sidenote: D. Oderweller has notes from 1940-50's from gillnetting Suisun Bay which included green sturgeon and steelhead.
- xvii. We may need to tag more adults out in the water to get enough information. Field crews are getting acoustic tag information without being able to get information about who tagged this fish. Need better coordination with other organizations, even possibly outside the IEP signatory agencies, to get information about tag information.
- xviii. Sidenote: Data entry from sturgeon report card is underway. We should get some more information from this effort and it seems like when people fish in river they have success. Additional information about fishing for

green sturgeon would assist with argument to DFG Commission for river closure.

- xix. Sidenote: More information about Sturgeon cards. Sacramento River needs to be split into more sturgeon-relevant reaches. Any suggestions would be useful about differentiating the reaches
- xx. Sidenote: Length information currently not included on card, perhaps use below or above legal size. Using size categories will give you more data than where we are now.
- xxi. We need to know what the impacts of RBDD is on the species. We know fish get above RBDD before they go in, spawning happens up there and also downstream, so this should help how we manage RBDD.
- xxii. Would like to know flow regime effect on juvenile movement through the delta. Large monitor array (~200 stations) would be useful for mark-recapture if enough individuals could be marked with acoustic tags. Currently, ~600 fish used in salmonid mark-recapture study with acoustic array for reach specific survivals, so is it even possible to get enough of these fish in our hands.
- xxiii. Maybe a link to the Central Valley fish tagging consortium on the IEP website would be useful.
- xxiv. PSMFC also talked at the WDFW green sturgeon meeting about assisting with acoustic tag database. J Israel can send on directions or names of PSMFC people who could be contacted about this.
- xxv. How do sturgeon use the floodplain? What are impediments to sturgeon on the bypasses- Fremont Weir, Colusa Drain. In past 5 years, we have seen 0 to 200 daily in the fyke net there. Are these large catches- spawning, pulses of migrants? No greens seen, so are they getting through without detection, what is better way of catching them? What about predation on yoy size class.
- xxvi. Sidenote: Knights Landing fyke net, white sturgeon and maybe 1 green were found in this area. Up to a couple hundred sturgeon in a single day.
- xxvii. Sea lions are starting to predate on adult white sturgeon and are moving up the river further. They are being seen at trapping sites and also at DFG Bay sturgeon trammel nets.
- xxviii. FWS Delta juvenile fish sampling surveys- currently not observing sturgeon, but would be willing to incorporate projects.
- xxix. In the Bay, it would be useful to use more long term tags on green and white sturgeon.
- xxx. What is the current main stressor- habitat degradation or fishing? What will be the easiest way to get ahead and ensure viability over 50 years? Legal fishing pressure has varied from 2 to 10%, which is very high. Loss of habitat and suitable spawning habitat for green sturgeon is a big stressor. Modified flows could be having large impact on larval survival, larvae may not be making it to the right place.
- xxxi. Do we know what the sturgeon habitat is for white sturgeon? Where, when, how do they select it? Is it possible that white sturgeon use rip rap to increase available spawning habitat in the Sacramento?

VII. Questions the PWT would like to address

- i. Growth, mortality, and recruitment information about these species in the wild.
- ii. How do we get to annual surveys for each of the species?

VIII. Other ideas/topics

- i. Virtual meeting
 - a. Some people can join by phone or web. We should always have a conference line available.
- ii. Sturgeon references
 - a. Can the Endnote be on the website and can the references be posted into Endnote? Can we use this to have others add to the references?
- iii. Website
 - a. Should not be difficult to set up and IEP should support this as they support the group. Should consider that the IEP website is not kept up well, the chairs need to follow up on this and work directly with an IEP webmaster. Make requests for website in writing to IEP Management Team, though this may be difficult since IEP is way behind on their website. DFG has FTP site that could house a sturgeon library. Consider public website for listserv, etc. (yahoo groups, google probably has something).
- iv. Salvage operations
 - a. This may be a feasible way to get samples some years, but every year is different. They have kept fish for short periods to assist in getting samples, but can these be brought into captivity? Fish captured at the trash racks or salvage may not be useful for all kinds of studies. The people we tend to talk with down there are operational folks, not researchers, so have to consider what you can get from them. Louvre efficiency for sturgeon is not yet done, but the BOR-Denver office will be evaluating this soon for WS.

IX. Next meeting

- i. Wednesday, September 10, 2008 (11th is alternate date) at UC Davis Watershed Center, 10am – 3pm.

Attendance list:

1. Mark Adkison - CDFG
2. Shannon Brewer - USFWS
3. Brad Cavallo – Cramer Fish Sciences
4. Robert Chase - USBR
5. Richard Corwin - USBR
6. Andrea Drauch - UCD
7. Marty Gingras - CDFG
8. Josh Gruber - USFWS
9. Tim Heyne - CDFG
10. David Hu - USFWS
11. Jack Ingram - USFWS
12. Josh Israel - UCD
13. Zac Jackson - USFWS
14. Pete Klimley - UCD
15. Mike Marshall - USFWS
16. Zoltan Matica - DWR
17. Bill Poytress - USFWS
18. Alicia Seesholtz - DWR
19. Jeff Stuart - NMFS
20. Michael Thomas - UCD